

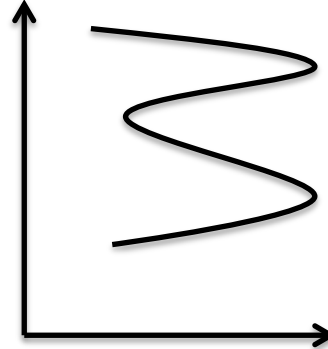
Name: _____ Date: _____ Period: _____

Unit 6 Test Form B

40

Determine whether each relation is a function. Explain, or show, why or why not in one sentence. (2 points each)

$(4, 3)$ $(-1, 2)$ $(2, -1)$ $(3, 5)$

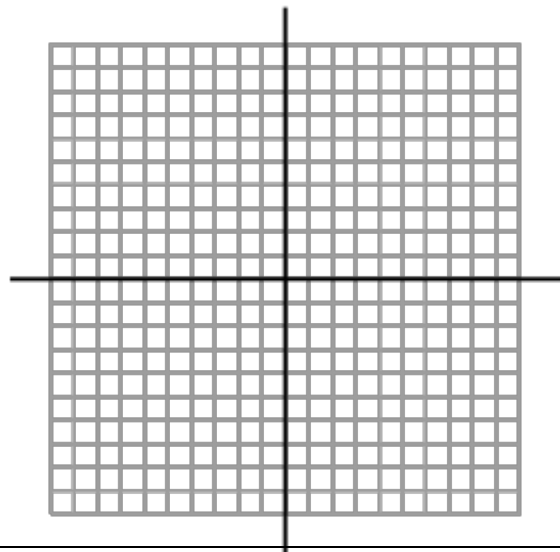
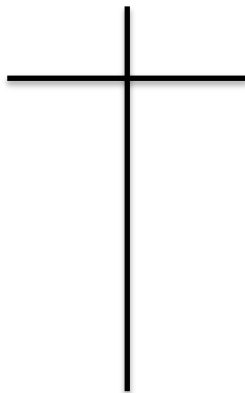


Find the range from the given domain $\{-2, 0, 2, 5\}$. (2 points)

$$f(n) = 4n - 10$$

Create a table of values and graph the function. (2 points)

$$f(x) = -3x + 1$$



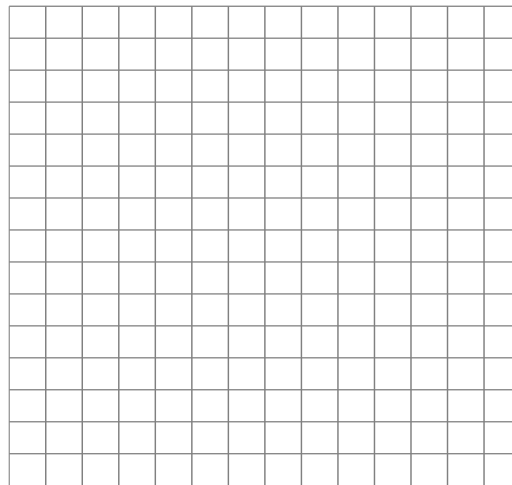
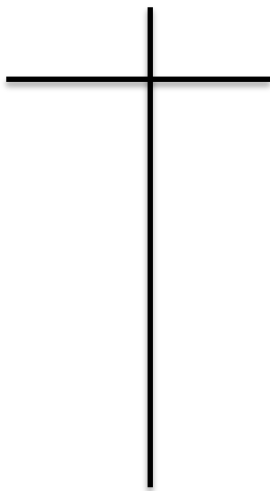
Situation. A canoe rental service charges a \$30 per hour that you rent the canoe.

Write a function rule to describe this relationship. (3 points)

Let ____ = _____ Let ____ = _____

Equation: _____

Model the function with a table of values and a graph. (2 points)



Find the constant of proportionality in each equation. (2 points)

$$y = -3x$$

$$y - 2x = 0$$

Write an equation of the direct variation that includes the point (4, -8). (1 point)

For the table, tell whether y varies directly with x. If it does, write an equation for

the direct variation. (2 points)													
<table border="1"> <tr> <th>x</th> <th>y</th> </tr> <tr> <td>-1</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>-2</td> </tr> <tr> <td>-3</td> <td>3</td> </tr> </table>		x	y	-1	1	0	0	2	-2	-3	3	Direct Variation: yes or no Equation: _____	
x	y												
-1	1												
0	0												
2	-2												
-3	3												
Shawn's weekly pay is directly proportional to the number of hours worked. Shawn's pay is \$123 for 20 hours of work. Find the amount of pay for 31 hours of work. (2 points)													
If y varies directly with x, when x = 2 and y = 4, find x when y = 18. (1 point)		If y varies inversely with x when x = 4 and y = 6, find y when x = 12. (1 point)											
Determine if each equation is direction variation, inverse variation, or neither. (4 points)													
$y = \frac{2}{x}$	$y = 3x$	$y = 2x + 4$	$2y + 3x = 2$										

Decide if each data set represents a <i>direct variation</i> or an <i>inverse variation</i> . Then , write an equation to model the data. (4 points)																			
<table border="1"> <tr> <th>x</th> <th>y</th> </tr> <tr> <td>3</td> <td>12</td> </tr> <tr> <td>18</td> <td>2</td> </tr> <tr> <td>-3</td> <td>-12</td> </tr> </table>		x	y	3	12	18	2	-3	-12	<table border="1"> <tr> <th>x</th> <th>y</th> </tr> <tr> <td>4</td> <td>12</td> </tr> <tr> <td>3</td> <td>9</td> </tr> <tr> <td>-3</td> <td>-9</td> </tr> </table>		x	y	4	12	3	9	-3	-9
x	y																		
3	12																		
18	2																		
-3	-12																		
x	y																		
4	12																		
3	9																		
-3	-9																		
direct variation OR inverse variation		direct variation OR inverse variation																	
equation:		equation:																	

Find the constant of variation k for the inverse variation. (2 points)

$(7, -2)$

$x = 3.5$ when $y = 4$

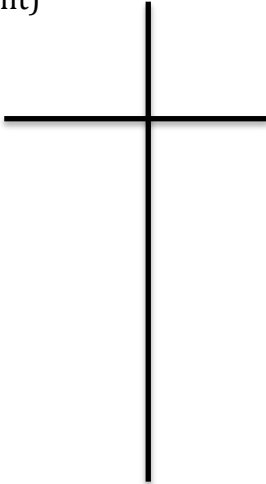
Situation: A taxi cab in DC charges a flat rate of \$3 for using the taxi and \$0.75 per mile.

Write a function rule to describe this relationship. (3 points)

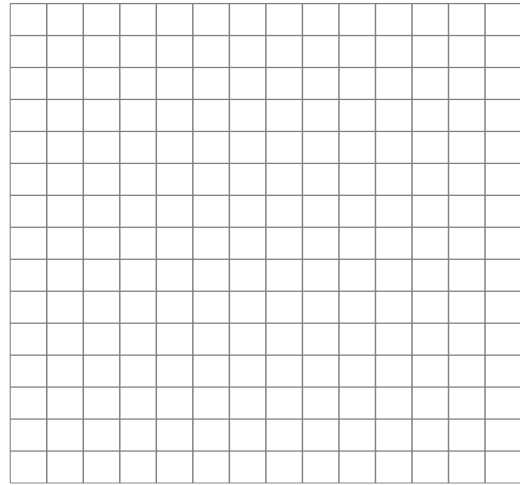
Let ____ = _____ Let ____ = _____

Equation: _____

Create a table of values. (1 point)



(1 point)



How much would a taxi ride for 8 miles cost? (1 point)

If a taxi ride cost \$15, how many miles did the taxi travel? (1 point)

Tell me one thing you are excited to do during spring break. (1 point)

